



FLOW OF FUNDS REPORT

TUYID Q1-2023

FLOW OF FUNDS REPORT: TUYID Q1-2023

March 2023

Dear Readers,

We are happy to present the Flow of Funds Report for the first quarter of 2023. Our report offers a detailed insight into the institutional ownership by investment type and regions as well as top buyers and sellers in the Turkish market. We also provide key investor hubs for roadshows and trust the report will be an important asset in IR planning and investor targeting.

Turkey's strong performance in 2022 was muted in Q1 2023, dropping -34pp from the highs reached in December 2022. The BIST remains the strongest performer of the peer group, with MSCI Europe (-1.2%) being the best performer after Turkey. The Poland WIG remains under pressure (-18.5%), despite a stronger performance in the second half of 2022. The Russian RTS showed some signs of recovery despite the ongoing conflict with Ukraine.

Net outflows were experienced across all regions, with the exception of Poland (+\$6,014.9M) and Hungary (+\$75.3M), which saw inflows. **Capital Research Global Investors** (-\$58.4M), **Robeco Institutional Asset Management BV** (-\$39.1M) & **Fidelity Management & Research Company, LLC** (-\$36.5M), were top sellers within the Turkish Market.

Active investors were bearish across all sectors (-\$316.9M), except for Healthcare which saw modest inflows (+\$2.3M). The biggest outflows from active investors were witnessed in the Consumer Goods (-\$92.3M) & Consumer Services (-\$84.7M) sectors. Passive investors went against this trend, and were bullish across all sectors, except for Utilities (-\$4.8M). The largest inflows by passive investors went to the Industrials sector (+\$51.0M).

The orientation remains skewed towards Passive investors, with 71% of Turkish funds being held by Passive investors. Index investors were once again the only substantial contributors to inflows into the Turkish Market (+\$202.8M). Index investors continue to be the largest investor in the Turkish market (\$5,196.7M), followed by Deep Value/Value (\$3,406.7M). Agg Gr./Growth investors were the largest detractors over the quarter (-\$141.7M), driven by **Fidelity Management & Research Company, LLC** (-\$36.5M) & **Goldman Sachs Asset Management International** (-\$17.2M).

London remains the top invested city, despite outflows amounting to (-\$79.7M) which were mainly attributable to the selling activity of **Schroder Investment Management, LTD** & **Goldman Sachs Asset Management International**.

In terms of number of investors per city, London continues to lead the ranking with 67 investors, followed by New York (26) and Istanbul (11).

This report is prepared quarterly by S&P Global, in cooperation with T  Y  D, using S&P Global's database. We look forward to any feedback you may have.

S&P Global
Director, Shareholder Intelligence EMEA
Frederik Frank

T  Y  D Turkish IR Society
Chair
Ba  ak   ge

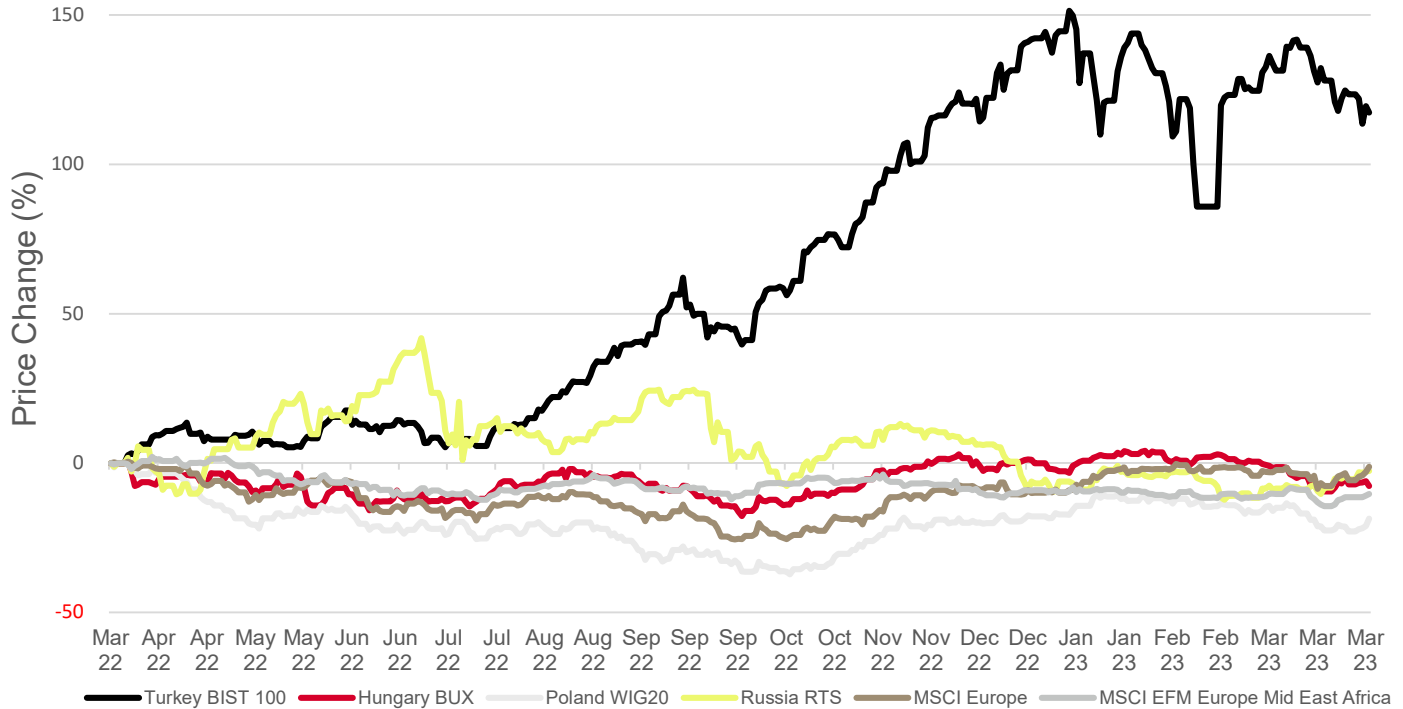
Acknowledgements: We express our gratitude to the S&P Global Issuer Solutions team and the T  Y  D Turkish IR Society.

Disclaimer: The evaluations and the information in the Report, where you can find significant statistics about the stock exchange, are prepared based on S&P Global's database. Investment information, comment and advices are not in the enclosure of investment consultancy and do not comprise information for buying and selling decisions in the capital markets. The data and the information in the Report cannot be guaranteed to be correct; the content can be changed without announcing. All the data are taken from the sources thought to be reliable. The data used in this report is sourced from publicly disclosed portfolios/information and due to the reporting periods, there may be discrepancies (data sources used in this report include, but are not limited to, FactSet, Morningstar, SEC filings (13Fs etc.) and news sources). S&P Global and T  Y  D cannot be taken responsible for the problems that might emerge out of using these sources.

FLOW OF FUNDS REPORT: TUYID Q1-2023

Price performance:

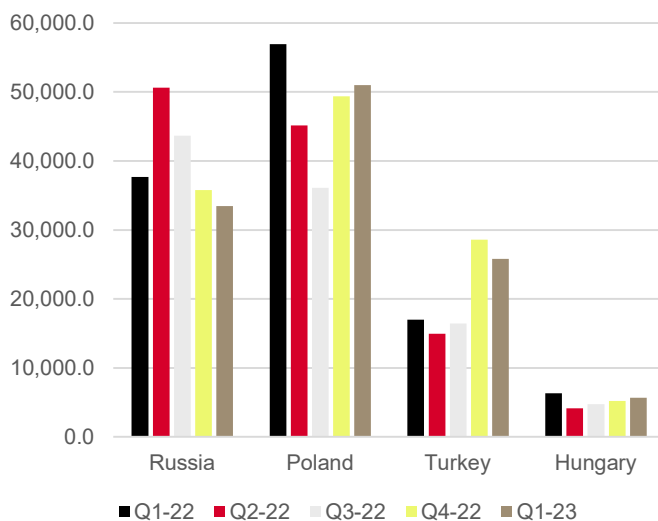
Turkey's strong performance in 2022 was muted in Q1 2023, dropping -34pp from the highs reached in December 2022. The BIST remains the strongest performer of the peer group, with MSCI Europe (-1.2%) being the best performer after Turkey. The Poland WIG remains under pressure (-18.5%), despite a stronger performance in the second half of 2022. The Russian RTS showed some signs of recovery despite the ongoing conflict with Ukraine.



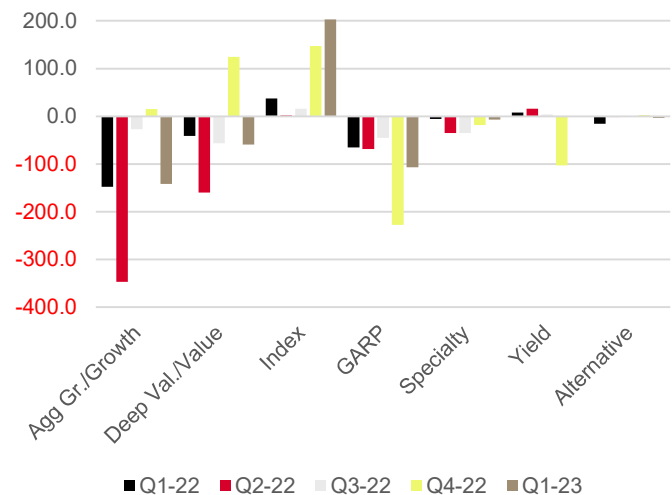
Inflows and Outflows:

Net outflows were experienced across all regions, with the exception of Poland and Hungary, which saw modest inflows. **Capital Research Global Investors** (-\$58.4M), **Robeco Institutional Asset Management BV** (-\$39.1M) & **Fidelity Management & Research Company, LLC** (-\$36.5M), were top sellers within the Turkish Market.

Institutional Investment in Region (\$M)



Institutional Investment by Style (\$M Chg)

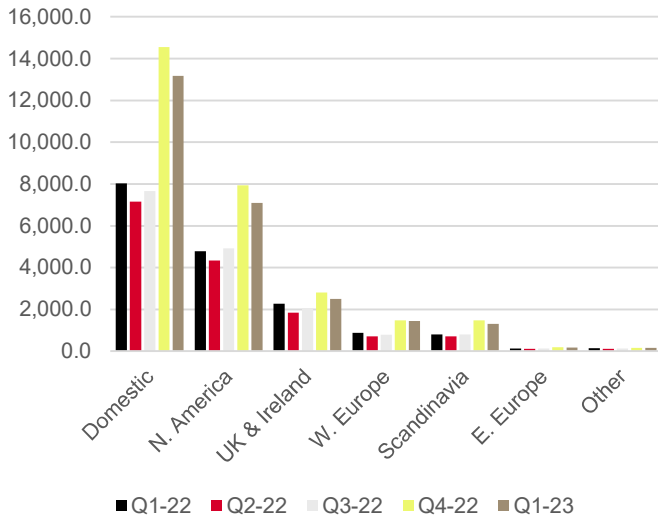


FLOW OF FUNDS REPORT: TUYID Q1-2023

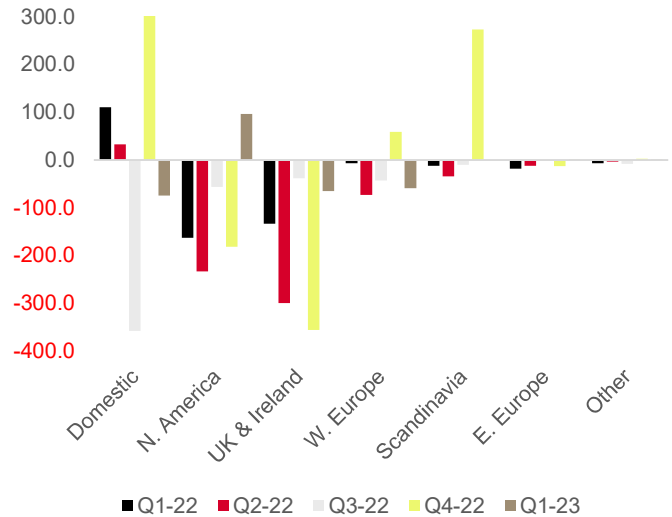
Investment by Investor Region:

The net outflows (-\$100.3M) in the Turkish market are broken down by geographic regions below and were driven by Domestic investors (-\$73.9M), who contributed to inflows in the previous quarter. North American investors were bullish on the Turkish Market (+\$96.8M). Domestic investors continue to be the largest holders in the Turkish market (\$13,173.2M), followed by North America (\$7,089.8M)

Institutional Investment by Region (\$M)



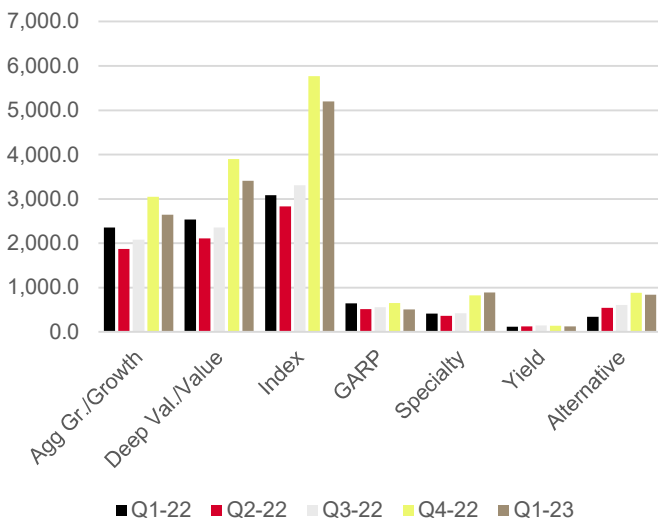
Institutional Investment by Region (\$M Chg)



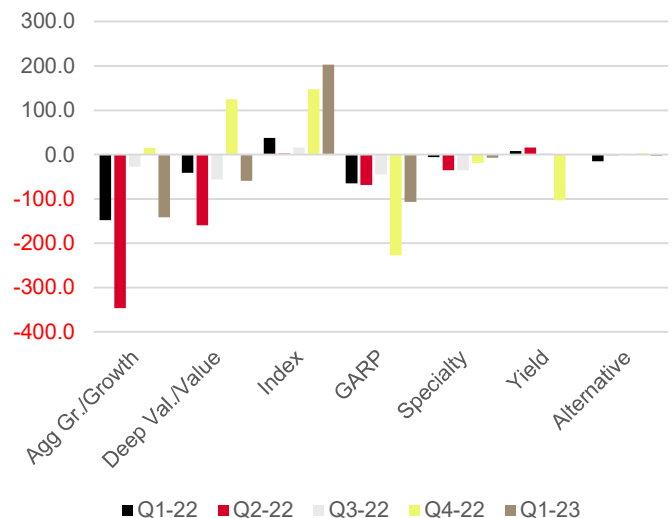
Investment by Style:

Index investors were once again the only substantial contributors to inflows into the Turkish Market (+\$202.8M). Index investors continue to be the largest investor in the Turkish market (\$5,196.7M), followed by Deep Value/Value (\$3,406.7M). Agg Gr./Growth investors were the largest detractors over the quarter (-\$141.7M), driven by **Fidelity Management & Research Company, LLC** (-\$36.5M) & **Goldman Sachs Asset Management International** (-\$17.2M).

Institutional Investment by Style (\$M)



Institutional Investment by Style (\$M Chg)



FLOW OF FUNDS REPORT: TUYID Q1-2023

Top Active Holders, Buyers & Sellers

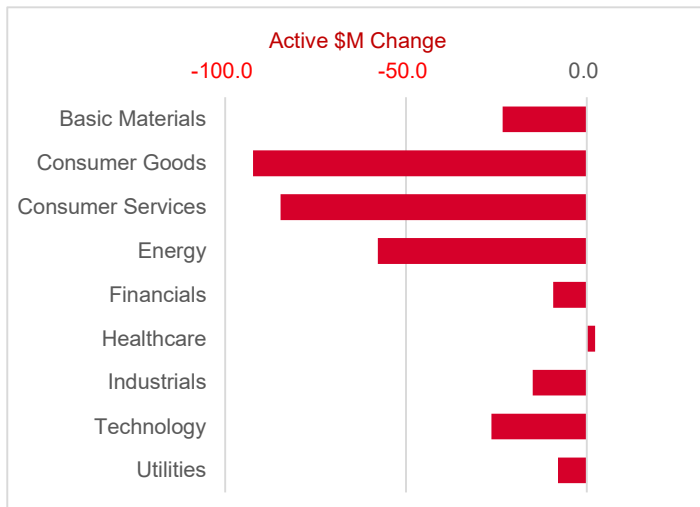
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Norges Bank Investment Management (Norway)	Norway	Value	Low	858,591.7	976.9	0.0	0.1	0.0
Helikon Investments, LTD (United Kingdom)	United Kingdom	Alternative	Low	1,836.1	523.1	0.0	28.5	0.0
APG Asset Management N.V.	Netherlands	Specialty	Low	140,090.2	209.9	0.0	0.1	0.0
Capital World Investors (U.S.)	United States	Value	Low	771,140.3	180.1	61.6	0.0	52.0
Silchester International Investors, LLP	United Kingdom	Value	Low	22,970.9	176.1	-8.8	0.8	-4.8
California Public Employees Retirement System	United States	Growth	Low	117,193.7	169.7	0.0	0.1	0.0
GQG Partners, LLC	United States	Growth	High	74,584.7	145.4	0.5	0.2	0.3
Conifer Management, LLC	United States	Alternative	Low	1,967.6	136.1	0.0	6.9	0.0
Mellon Investments Corporation	United States	Yield	Low	215,466.9	109.7	3.9	0.1	3.7
Caisse de dépôt et placement du Québec	Canada	Value	Low	84,924.9	89.4	0.0	0.1	0.0
				2,716.4	57.2			

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Capital World Investors (U.S.)	United States	Value	Low	771,140.3	180.1	61.6	0.0	52.0
East Capital Asset Management AB	Sweden	GARP	Medium	854.2	29.0	15.9	3.4	121.9
UBS Asset Management Switzerland AG	Switzerland	Value	Low	165,924.2	29.3	11.0	0.0	60.1
BlackRock Investment Management (U.K.), LTD	United Kingdom	Growth	Low	699,789.8	62.5	8.3	0.0	15.4
J.P. Morgan Investment Management, Inc.	United States	Growth	Low	462,502.7	28.6	6.3	0.0	28.4
American Century Investment Management, Inc.	United States	Growth	Medium	152,199.7	64.5	6.2	0.0	10.7
T. Rowe Price International, LTD	United Kingdom	Growth	Low	89,473.0	7.5	4.8	0.0	177.6
MFS Investment Management	United States	Value	Low	344,115.9	60.0	4.5	0.0	8.2
Irish Life Investment Managers, LTD	Ireland	Value	Low	20,722.7	28.6	4.1	0.1	16.8
Mellon Investments Corporation	United States	Yield	Low	215,466.9	109.7	3.9	0.1	3.7
				599.9	126.8			

TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Capital Research Global Investors (U.S.)	United States	GARP	Low	485,112.2	47.7	-58.4	0.0	-55.0
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	54,400.1	75.1	-39.1	0.1	-34.3
Fidelity Management & Research Company, LLC	United States	Growth	Low	1,173,408.3	35.2	-36.5	0.0	-51.0
Schroder Investment Management, LTD	United Kingdom	GARP	Low	148,421.6	85.3	-32.6	0.1	-27.6
Graham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	28,683.2	47.7	-28.9	0.2	-37.7
Goldman Sachs Asset Management International	United Kingdom	Growth	High	23,196.8	17.2	-17.2	0.1	-49.9
Wellington Management Company, LLP	United States	Value	Low	560,281.6	25.7	-16.5	0.0	-39.1
Ökworld Lux S.A.	Luxembourg	Growth	Very High	3,683.5	13.6	-14.8	0.4	-52.2
Victory Capital Management, Inc.	United States	GARP	Medium	101,236.3	20.5	-13.0	0.0	-38.8
Columbia Threadneedle Management, LTD	United Kingdom	Value	Low	25,584.4	4.5	-12.7	0.0	-73.9
				372.4	-269.6			

Includes Investors with EUM greater than \$100M; Excludes Passive/Index Investors

Sector Inflows/Outflows



% Change in Active Investment vs 5 Previous Quarters



FLOW OF FUNDS REPORT: TUYID Q1-2023

Top Passive Holders, Buyers & Sellers

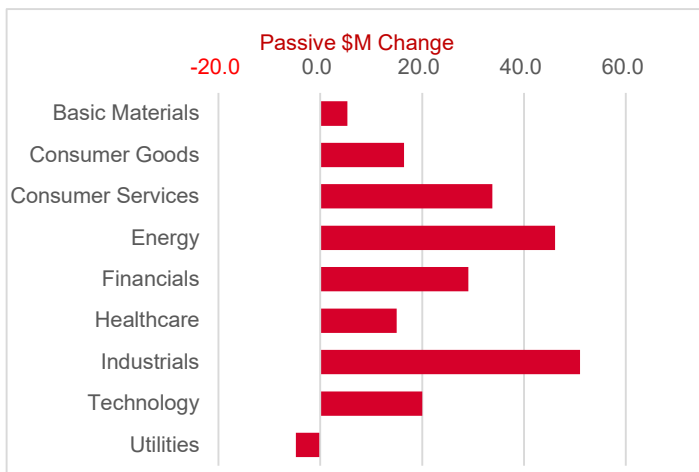
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	4,699,893.5	2,256.1	189.6	0.0	9.2
BlackRock Fund Advisors	United States	Index	Low	2,838,647.8	1,173.7	-27.1	0.0	-2.3
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	238,539.3	434.1	1.7	0.2	0.4
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	419,275.6	426.9	47.5	0.1	12.5
Charles Schwab Investment Management, Inc.	United States	Index	Low	427,497.9	183.7	-19.0	0.0	-9.4
Geode Capital Management, LLC	United States	Index	Low	896,001.4	181.3	13.3	0.0	7.9
Arrowstreet Capital, L.P.	United States	Deep Value	High	81,841.7	144.3	-15.1	0.2	-9.5
Van Eck Associates Corporation	United States	Index	Low	56,085.5	127.8	0.7	0.2	0.6
First Trust Advisors, L.P.	United States	Index	Medium	93,545.8	125.3	27.2	0.1	27.7
Acadian Asset Management, LLC	United States	Deep Value	Medium	33,121.3	112.3	-18.4	0.3	-14.1
				5,165.4	200.4			

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	4,699,893.5	2,256.1	189.6	0.0	9.2
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	419,275.6	426.9	47.5	0.1	12.5
First Trust Advisors, L.P.	United States	Index	Medium	93,545.8	125.3	27.2	0.1	27.7
Research Affiliates, LLC	United States	Index	Medium	2,370.0	79.8	15.8	3.4	24.7
Geode Capital Management, LLC	United States	Index	Low	896,001.4	181.3	13.3	0.0	7.9
Northern Trust Global Investments, LTD	United Kingdom	Index	Low	79,602.2	55.7	8.3	0.1	17.5
Legal & General Investment Management, LTD	United Kingdom	Index	Low	343,276.0	75.8	6.8	0.0	9.8
State Street Global Advisors (SSgA)	United States	Index	Low	1,873,703.8	110.2	4.5	0.0	4.3
Vanguard Global Advisers, LLC	United States	Index	Low	28,611.4	31.8	4.3	0.1	15.6
Cambria Investment Management, L.P.	United States	Index	High	1,732.1	30.5	4.1	1.8	15.3
				3,373.3	321.2			

TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
BlackRock Fund Advisors	United States	Index	Low	2,838,647.8	1,173.7	-27.1	0.0	-2.3
Invesco Capital Management, LLC	United States	Index	Low	341,306.8	33.7	-22.0	0.0	-39.5
Charles Schwab Investment Management, Inc.	United States	Index	Low	427,497.9	183.7	-19.0	0.0	-9.4
Acadian Asset Management, LLC	United States	Deep Value	Medium	33,121.3	112.3	-18.4	0.3	-14.1
Arrowstreet Capital, L.P.	United States	Deep Value	High	81,841.7	144.3	-15.1	0.2	-9.5
Quoniam Asset Management GmbH	Germany	Value	Medium	5,558.7	2.8	-12.0	0.1	-80.9
Global X Management Company, LLC	United States	Index	Low	39,281.4	17.9	-5.7	0.0	-24.3
UBS Asset Management (U.K.), LTD	United Kingdom	Index	Low	123,783.3	31.0	-3.7	0.0	-10.8
Northern Trust Investments, Inc.	United States	Index	Low	471,503.2	14.1	-3.4	0.0	-19.4
PGIM Quantitative Solutions, LLC	United States	Index	Medium	58,270.7	13.2	-2.2	0.0	-14.1
				1,726.8	-128.6			

Includes Investors with EUM greater than \$100M; Excludes Active Investors

Sector Inflows/Outflows



% Change in Passive Investment vs 5 Previous Quarters



FLOW OF FUNDS REPORT: TUYID Q1-2023

Road show:

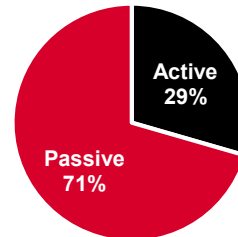
London remains the top invested city, despite outflows amounting to (-\$79.7M) which were mainly attributable to the selling activity of **Schroder Investment Management, LTD & Goldman Sachs Asset Management International**. In terms of number of investors per city, London continues to lead the ranking with 67 investors, followed by New York (26) and Istanbul (11).

Most Invested					Most Investors				
Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms	Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	2,234,746.7	1,609.4	-79.7	67	United Kingdom (London)	2,234,746.7	1,609.4	-79.7	67
Turkey (Istanbul)	1,023.2	1,016.2	-87.4	11	United States (New York)	2,459,924.5	314.1	1.0	26
Norway (Oslo)	909,188.4	992.5	1.3	3	Turkey (Istanbul)	1,023.2	1,016.2	-87.4	11
Germany (Stuttgart)	6,087.9	539.9	0.0	1	Switzerland (Zürich)	487,866.7	128.4	14.3	11
United States (Boston)	2,738,094.5	326.2	-73.7	10	United States (Boston)	2,738,094.5	326.2	-73.7	10
United States (New York)	2,459,924.5	314.1	1.0	26	Poland (Warsaw)	16,337.1	77.5	0.5	10
United States (Los Angeles)	1,310,526.6	253.6	5.9	7	Finland (Helsinki)	30,316.0	37.7	-0.8	10
Netherlands (Amsterdam)	142,689.4	210.7	0.0	3	Japan (Tokyo)	897,912.6	46.5	0.0	9
Sweden (Stockholm)	298,938.7	179.4	10.3	8	South Korea (Seoul)	46,207.0	5.6	-5.7	9
United States (Sacramento)	117,193.7	169.7	0.0	1	Sweden (Stockholm)	298,938.7	179.4	10.3	8
Germany (Frankfurt)	399,835.6	146.6	1.8	8	Germany (Frankfurt)	399,835.6	146.6	1.8	8
United States (Fort Lauderdale)	80,545.0	145.8	0.5	3	United States (Chicago)	171,519.1	7.8	0.3	8
Switzerland (Zürich)	487,866.7	128.4	14.3	11	United States (Los Angeles)	1,310,526.6	253.6	5.9	7
Canada (Montreal)	91,182.2	107.8	-0.0	3	Singapore (Singapore)	48,954.8	16.9	0.5	7
Netherlands (Rotterdam)	76,018.2	85.7	-37.9	2	Switzerland (Geneva)	19,351.6	11.9	0.7	7
Poland (Warsaw)	16,337.1	77.5	0.5	10	Canada (Toronto)	278,065.8	11.0	-1.0	6
Belgium (Brussels)	87,162.5	72.4	6.4	3	Austria (Vienna)	21,156.0	66.1	-7.5	5
Austria (Vienna)	21,156.0	66.1	-7.5	5	Denmark (Copenhagen)	128,646.8	45.8	-3.7	5
United States (San Antonio)	103,390.7	65.8	-19.9	2	Ireland (Dublin)	44,576.1	43.4	5.8	5
United States (Kansas City)	158,464.6	64.5	6.2	2	France (Paris)	262,505.4	22.3	-3.5	5
Excludes Passive/Index Investors		6,572.3	-257.9	186	Excludes Passive/Index Investors		4,366.5	-221.8	234

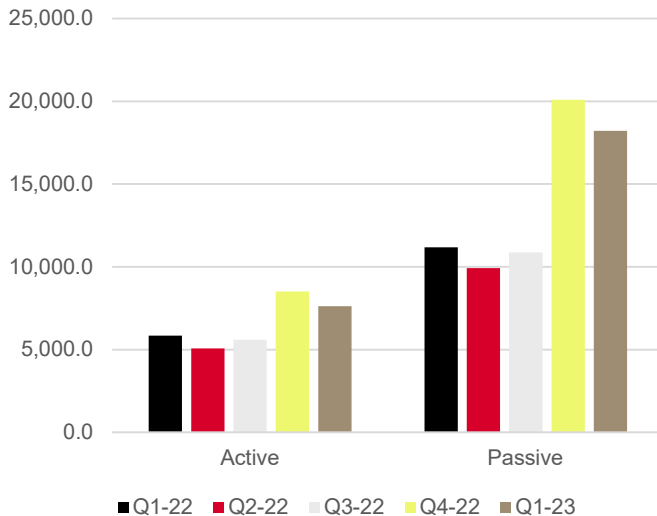
Active vs. Passive investors

Active investors contributed to outflows (-\$317.9M). Passive investors continue to hold the bulk of the Turkish market (71%).

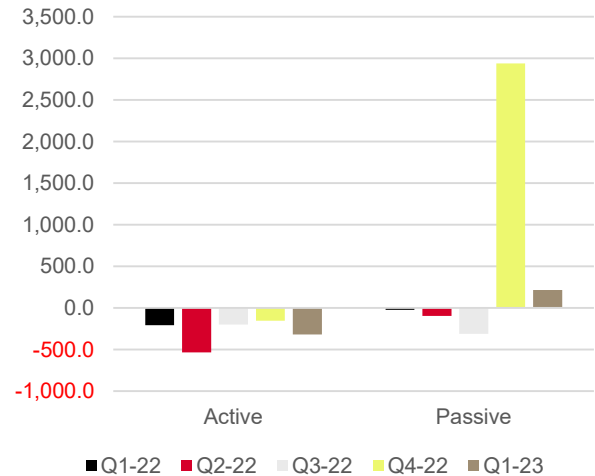
Active vs Passive Split



Active vs Passive (\$M)



Active vs Passive (\$M Chg)



FLOW OF FUNDS REPORT: TUYID Q1-2023

Top Holders, Buyers & Sellers – Corporate Debt

TOP HOLDERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Amundi (U.K.), LTD	United Kingdom	London	Medium	15,794.2	226.8	0.3	1.4	0.1
Goldman Sachs Asset Management International	United Kingdom	London	Very High	65,254.4	165.8	-19.7	0.3	-10.6
TIAA-CREF Investment Management, LLC	United States	New York	Very High	207,801.3	120.9	-15.7	0.1	-11.5
Dimensional Fund Advisors, L.P. (U.S.)	United States	Austin	Medium	84,668.7	114.1	102.8	0.1	912.7
Pictet Asset Management, LTD	United Kingdom	London	Medium	8,672.9	99.8	11.2	1.2	12.7
Ninety One UK, LTD	United Kingdom	London	High	12,212.2	90.0	11.9	0.7	15.3
CIGNA Investments, Inc.	United States	Bloomfield	Low	4,084.7	69.5	0.0	1.7	0.0
Towarzystwo Funduszy Inwestycyjnych PZU S.A.	Poland	Warsaw	Medium	2,030.4	59.6	-20.7	2.9	-25.7
BlackRock Advisors (U.K.), LTD	United Kingdom	London	Low	214,653.9	56.7	-7.6	0.0	-11.8
Vontobel Asset Management AG (Switzerland)	Switzerland	Zürich	Low	11,416.9	54.4	1.4	0.5	2.7
					1,057.6	64.0		

TOP BUYERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Dimensional Fund Advisors, L.P. (U.S.)	United States	Austin	Medium	84,668.7	114.1	102.8	0.1	912.7
Ninety One UK, LTD	United Kingdom	London	High	12,212.2	90.0	11.9	0.7	15.3
Pictet Asset Management, LTD	United Kingdom	London	Medium	8,672.9	99.8	11.2	1.2	12.7
Nordea Investment Management AB (Denmark)	Denmark	Copenhagen	Medium	40,149.3	33.4	8.9	0.1	36.2
New York Life Investment Management, LLC	United States	New York	Low	216,141.7	33.9	7.6	0.0	29.1
Ashmore Investment Management, LTD	United Kingdom	London	High	6,297.1	18.1	6.9	0.3	61.9
Victory Capital Management, Inc.	United States	San Antonio	Low	61,435.5	9.8	4.9	0.0	102.2
M&G Investment Management, LTD	United Kingdom	London	Medium	35,155.2	15.2	4.5	0.0	42.2
Federated Investment Management Company	United States	Pittsburgh	Very High	291,556.2	19.1	3.7	0.0	24.2
Erste Asset Management GmbH	Austria	Vienna	Low	7,874.8	15.4	3.6	0.2	30.0
					448.7	166.1		

TOP SELLERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Trea Asset Management, S.G.I.I.C., S.A.	Spain	Barcelona	Very High	3,193.8	17.1	-40.7	0.5	-70.5
AIG Asset Management (U.S.), LLC	United States	New York	Low	145,811.4	29.3	-29.8	0.0	-50.5
Towarzystwo Funduszy Inwestycyjnych PZU S.A.	Poland	Warsaw	Medium	2,030.4	59.6	-20.7	2.9	-25.7
Goldman Sachs Asset Management International	United Kingdom	London	Very High	65,254.4	165.8	-19.7	0.3	-10.6
Union Investment Privatfonds GmbH	Germany	Frankfurt	Low	45,692.3	45.1	-17.3	0.1	-27.8
TIAA-CREF Investment Management, LLC	United States	New York	Very High	207,801.3	120.9	-15.7	0.1	-11.5
DWS Investment GmbH	Germany	Frankfurt	High	81,420.3	32.6	-9.1	0.0	-21.9
T. Rowe Price Associates, Inc.	United States	Baltimore	High	144,160.5	7.7	-8.8	0.0	-53.3
Fidelity Management & Research Company, LLC	United States	Boston	High	817,400.2	8.3	-7.6	0.0	-47.9
BlackRock Advisors (U.K.), LTD	United Kingdom	London	Low	214,653.9	56.7	-7.6	0.0	-11.8

Corporate Debt – City Analysis

Most Invested					Most Investors				
Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms	Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,094,559.2	983.4	15.1	44	United Kingdom (London)	1,094,559.2	983.4	15.1	44
United States (New York)	1,454,331.2	279.7	-44.6	21	United States (New York)	1,454,331.2	279.7	-44.6	21
Switzerland (Zürich)	242,456.4	205.9	1.9	13	Switzerland (Zürich)	242,456.4	205.9	1.9	13
United States (Boston)	1,531,827.0	184.5	-12.8	11	France (Paris)	209,979.9	75.6	4.1	12
United States (Austin)	84,668.7	114.1	102.8	1	United States (Boston)	1,531,827.0	184.5	-12.8	11
Germany (Frankfurt)	196,806.7	109.9	-27.1	11	Germany (Frankfurt)	196,806.7	109.9	-27.1	11
France (Paris)	209,979.9	75.6	4.1	12	Spain (Madrid)	32,217.5	8.7	-0.6	11
Denmark (Copenhagen)	61,606.0	73.9	7.3	4	Italy (Milan)	96,053.0	71.4	-10.7	9
Italy (Milan)	96,053.0	71.4	-10.7	9	Singapore (Singapore)	29,648.1	50.5	-4.7	9
United States (Bloomfield)	4,084.7	69.5	0.0	1	Austria (Vienna)	22,907.3	33.0	3.1	7
Poland (Warsaw)	2,792.1	65.6	-21.9	4	Denmark (Copenhagen)	61,606.0	73.9	7.3	4
Singapore (Singapore)	29,648.1	50.5	-4.7	9	Poland (Warsaw)	2,792.1	65.6	-21.9	4
United States (Newport Beach)	835,129.5	46.4	0.0	2	Germany (Munich)	21,365.2	20.6	1.1	4
Italy (Basiglio)	5,514.4	38.1	0.0	1	United States (Chicago)	28,885.9	13.6	0.7	4
United States (San Francisco)	711,923.2	37.8	-2.5	3	Ireland (Dublin)	29,053.2	8.1	0.1	4
United States (Jersey City)	139,602.0	36.5	-2.0	1	Switzerland (Lugano)	2,173.6	1.1	-2.1	4
United States (Charlotte)	297,287.5	34.5	-3.0	2	United States (San Francisco)	711,923.2	37.8	-2.5	3
Austria (Vienna)	22,907.3	33.0	3.1	7	Switzerland (Geneva)	13,997.8	16.1	-7.2	3
United States (Atlanta)	174,373.9	24.8	0.9	2	Luxembourg (Luxembourg)	7,752.5	13.0	2.9	3
France (Puteaux)	25,688.8	22.8	-6.1	1	Germany (Berlin)	3,558.6	3.9	-0.0	3
2,558.1 -0.2 159					2,256.4 -97.9 184				

FLOW OF FUNDS REPORT: TUYID Q1-2023

GLOSSARY

Institutional Investment Styles

Aggressive Growth – Investors in this category invest in companies that have very high revenue, EPS growth rates and multiples relative to the overall market. These companies usually do not pay any dividends and are at the early stages of growth. Aggressive Growth investors exhibit a higher portfolio turnover than other styles of investors.

Alternative – Primarily used to classify hedge funds that use various strategies that fall outside the traditional investment strategies that can be categorized as the above. A catch-all for lightly regulated investment vehicles that have the ability to "go-anywhere" and invest long or short in any type of security – equity, debt, commodity, options, currency, etc. Hedge funds seek to earn above market returns for their clients while at the same time controlling risk factors. Hedge funds have grown in prominence over the years as their returns net of fees (typically 2% management, 20% incentive) have outperformed mutual fund and pension managers performance. Recently, many hedge funds have gained notoriety as "activists" demanding change (leadership or strategic) at companies in North America, Europe and Asia.

Asset Allocation – Asset allocation managers allocate their investments among stocks, bonds, and cash equivalents, among others. It is primarily dictated by the various needs of clients and used by many smaller firms and banks.

Deep Value – Investors in this category employ an extreme style of value investing where they invest in companies with very low valuations versus their own historic valuation, and in relation to the overall market. Usually the companies or the industries they are in have been out of favour in the marketplace for an extended period of time.

GARP – These institutions seek to add growth stocks to their portfolios, but will not pay a premium price to obtain the securities. Thus, investors of this type are categorized as GARP, or "growth at a reasonable price," investors. Investors utilizing this investment approach will use methodologies and indicators favoured by both growth and value investors, but neither of the aforementioned styles dominates the process.

Growth – These institutions place the greatest emphasis in their selection process on the growth prospects of a company's earnings. Growth investors prefer companies where bottom line growth will average at least 15% annually and are willing to pay above market average multiples for a stock. At the first sign of an earnings slow-down, however, growth investors are often the quickest to sell.

Index – These institutions strive to match the performance of an equity index such as the MSCI EAFE Index or the S&P 500 Index, while at the same time keeping trading costs at a minimum. An institution accomplishes this by holding the stocks that comprise the index in its portfolio at the same proportion as the index. Indexing is a passive style of investing; stocks are bought and sold based upon their inclusion in an index and not on their fundamentals. Please note, index investors are not familiar with the companies in which they have made investments and are therefore considered investor relations immune.

Other – This style is applied to companies that are not investment firms, such as public companies.

Private Equity – This style is applied to firms that are private equity investors and their public equity holdings are the result of pre-IPO holdings.

Specialty – Applied to firms with investment strategies that cannot be categorized due to the specific nature of their focus. Industry or sector specific focus is the most common example of a Specialty investor.

Value – Value-oriented institutions prefer stocks that are trading at undervalued levels relative to some valuation such as a stock's intrinsic value or a company's free cash flow. Value investors tend to have longer-term investment horizons than their growth counterparts as they wait for the convergence of value and price.

Venture Capital – This style is applied to firms that are venture capital investors and their public equity holdings are the result of pre-IPO holdings.

Yield – Yield investors are sensitive to a high dividend yield and invest in companies with yield levels very high compared to the market yield, and have a history of paying and increasing dividends over time.

Orientation

Active – Indicates that the final investment decision making process at an institution is enacted by a portfolio manager or analyst. While computer screening models may be used in the investment process they are not utilized to make the final investment decision.

Passive – This category primarily captures index and quantitative investors. These investors utilize computer models to define an investable universe and make final portfolio decisions. Investor relations officers cannot influence these investment decisions.

FLOW OF FUNDS REPORT: TUYID Q1-2023

GLOSSARY

Turnover

Portfolio Equity Turnover is the measure of how frequently a portfolio buys or sells securities over a 12 month period. It is calculated as the sum of the dollar values of buys and sells over a given period, divided by the sum of the beginning and ending equity assets over the same period, reported as an annualized percentage.

A portfolio with a turnover rate of 100% replaces its entire portfolio throughout the course of a 12-month period, whereas, a portfolio with a turnover rate of 50% replaces half of its holdings during the same time.

- Low Turnover (0-33.3% per year)
- Medium Turnover (33.3 -66.6% per year)
- High Turnover (66.6-100% per year)
- Very High Turnover (Over 100% per year)

Equity Assets (\$M) – The market value of all current publicly disclosed ownership of equity securities held by an account/institution as identified by IHS Markit, expressed in millions of USD.

Value (\$M) – Total value invested in a company/country/region by an institution

Equation: $(\sum \text{All Shares Held Owned Over Period} \times \text{End-of-Period Security Price})$

Change (\$M) - Measures the actual buying/selling activity of institutions (excluding changes in the price of the underlying security). Throughout the report, Net Buy/Sell Activity may be displayed as a value or on a percent change .

Equation: $[(\sum \text{All Shares Bought Over Period} \times \text{End-of-Period Security Price}) - (\sum \text{All Shares Sold Over Period} \times \text{End-of-Period Security Price})]$

% Portfolio - The % of a Buy side institution's position in a company/country/region based on an institution's total portfolio value (Equity Assets (\$M)).

% Portfolio Change – The % change of the institution in the company/country/region

Equation: $[(\sum \text{Value} (\$M)) / ((\sum \text{Value} (\$M) - (\sum \text{Change} (\$M)) \times 100)]$

S&P Global's institutional ownership data is based on publicly-disclosed information, collected from such sources as regulatory ownership filings (including SEC forms 13F/D/G), disclosures made by mutual funds / pension funds to their beneficiaries, registration statements, news releases, and other sources. It should be noted that regulatory filings and other ownership sources vary widely country-by-country as to their completeness and timeliness. When an institutional investor's complete ownership is not disclosed by requirement, S&P Global aggregates and sums the publicly-filed portfolio information from the investor to arrive at a disclosed total equity figure. Data for the beginning and end of Q3-2021 can be considered a snapshot of the most current positions.